

CLAIMS

We claim:

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1. A retroreflective structure comprising an array of transparent prisms having a base and three facets extending therefrom to a common apex, the base of the prisms lying in a common plane, the prisms being spaced between 0.0005 inch to 0.003 inches on center with a reflective coating adhered to the facets.

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2. A retroreflective structure comprising an array of transparent faceted cube corner prisms having a base and three facets extending therefrom to a common apex, the base of the prisms lying in a common plane, the prisms being spaced 0.002 inches on center with a reflective coating adhered to the facets.

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15 3. The structure of claim 1, wherein a flat surface is provided between the base of prisms to reflect light.

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4. The structure of claim 1, which includes several arrays seamed together.

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5. The structure of claim 1, wherein the prisms are cube-corner prisms.

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6. The structure of claim 1, wherein adjacent prisms form prism pairs in which the tips of the apices of the prism pairs are tilted with respect to one another.

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7. The structure of claim 1, wherein the prisms are orientation free.

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8. The structure of claim 1, wherein the light retroreflected from the structures encompasses a 0.5 degree angle of observation, uniform orientation-free cone.

5 9. A method of forming retroreflective sheeting comprising the steps of:
10 a) forming a mold by forming three parallel sets of grooves in a body of mold material; the grooves intersecting at an angle to form a plurality of prism pairs, each prism in a pair having a base and three intersecting lateral faces which meet at an apex, and wherein the grooves between prism pairs are spaced between 0.0005 inch to 0.003 inches apart.

15 b) forming said sheeting in said mold;
c) removing the sheeting from the mold; and
d) before or after removing, coating the lateral faces with a light reflective material to form said sheeting for reflecting a uniform
20 orientation free cone of light which encompasses a 0.5 degree angle of observation.

10. Retroreflective sheeting formed by the method of claim 9.

11. A method of forming retroreflective sheeting comprising the steps of:
25 a) providing a mold comprised of a plurality of prism pairs, spaced between 0.0005 inch and 0.003 inches on center, each prism having a base and three intersecting lateral faces which meet at an apex;

- b) forming said sheeting in said mold;
- c) removing said sheeting from said mold; and
- d) before or after removing the sheeting coating the faces with reflective material.

✓ 5 12. The method of claim 10, wherein the prisms are made by forming three parallel sets of grooves spaced between 0.0005 inch to 0.003 inches apart in a body of mold material; the grooves intersecting at a dihedral angle, which dihedral angle may not be constant, and wherein the sheeting so formed will retroreflect a uniform orientation free cone of light encompassing a 0.5 degree angle of observation.

10 13. Retroreflective sheeting formed by the method of Claim 11.

15 14. A method of forming retroreflective sheeting comprising the steps of:

- a) forming a mold by forming three parallel sets of grooves in a body of mold material, the grooves spaced between 0.0005 inch to 0.003 inches apart; the grooves intersecting at an angle to form a plurality of prism pairs, each prism in a pair having a base and three intersecting lateral faces which meet at an apex;
- b) forming said sheeting in said mold;
- c) removing the sheeting from the mold; and
- d) before or after removal, coating the faces with metallic retroreflective material.

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